

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) An immunochemical assay for anti-HM1.24 antibody, said assay comprising the steps of reacting soluble HM1.24 antigen protein and anti-HM1.24 antibody contained in a test sample, and then detecting or determining the anti-HM1.24 antibody bound to the soluble HM1.24 antigen protein, wherein the soluble HM1.24 **antigenic antigen** protein is:

(a) a protein having the amino acid sequence modified by lacking 17 ~~or less or~~ **14** amino acid residues from C-terminal in the amino acid sequence shown in SEQ ID NO:1;

(b) a protein having the amino acid sequence modified by lacking 17 ~~or less or~~ **14** amino acid residues from C-terminal, and lacking **27** amino acid residues from N-terminal in the amino acid sequence shown in SEQ ID NO:1;

or

(c) a fusion protein comprising the protein described in the above (a) or (b), and a peptide selected from the group consisting of FLAG, 6 x His comprising 6 histidine residues, 10 x His, influenza hemagglutinin, fragments of human c-myc, fragments of VSV-GP, fragments of p18HIV, T7-tag, HSV-tag, E-tag, fragments of SV40T antigen, lcktag, fragments of  $\alpha$ -tubulin, B-tag, and fragments of Protein C, or a polypeptide selected from the group consisting of glutathione S-transferase, HA, the constant regions of immunoglobulin,  $\beta$ -galactosidase, and maltose-binding protein.

2. (Original) The immunochemical assay according to claim 1 wherein said soluble HM1.24 antigen protein is bound to a support.

3. (Currently Amended) An immunochemical assay for soluble HM1.24 antigen protein, said method comprising the steps of reacting anti-HM1.24 antibody and soluble HM1.24 antigen protein contained in a test sample, and then detecting or determining the

soluble HM1.24 antigen protein bound to the anti-HM1.24 antibody, wherein the soluble HM1.24 antigenic protein is:

(a) a protein having the amino acid sequence modified by lacking 17 ~~or less or~~ 14 amino acid residues from C-terminal in the amino acid sequence shown in SEQ ID NO:1;

(b) a protein having the amino acid sequence modified by lacking 17 ~~or less or~~ 14 amino acid residues from C-terminal, and lacking 27 amino acid residues from N-terminal in the amino acid sequence shown in SEQ ID NO:1;

or

(c) a fusion protein comprising the protein described in the above (a) or (b), and a peptide selected from a group consisting of FLAG, 6 x His comprising 6 histidine residues, 10 x His, influenza hemagglutinin, fragments of human c-myc, fragments of VSV-GP, fragments of p18HIV, T7-tag, HSV-tag, E-tag, fragments of SV40T antigen, lcktag, fragments of  $\alpha$ -tubulin, B-tag, and fragments of Protein C, or a polypeptide selected from a group consisting of glutathione S-transferase, HA, the constant regions of immunoglobulin,  $\beta$ -galactosidase, and maltose-binding protein.

4. (Original) The immunochemical assay according to claim 3 wherein said anti-HM1.24 antibody is bound to a support.

5. (Canceled)

6. (Previously Presented) The immunochemical assay according to claim 2, wherein said support is a bead or a plate.

7. (Previously Presented) The immunochemical assay according to claim 1 wherein the anti-HM1.24 antibody bound to the soluble HM1.24 antigen protein or the soluble HM1.24 antigen protein bound to the anti-HM1.24 antibody is detected or determined using a primary antibody against the anti-HM1.24 antibody or a primary antibody against the soluble HM1.24 antigen protein.

8. (Previously Presented) The immunochemical assay according to claim 1 wherein the anti-HM1.24 antibody bound to the soluble HM1.24 antigen protein or the soluble HM1.24 antigen protein bound to the anti-HM1.24 antibody is detected or determined using a primary antibody against the anti-HM1.24 antibody or a primary antibody against the soluble HM1.24 antigen protein, and a second antibody against said primary antibody.

9. (Previously Presented) The immunochemical assay according to claim 8, wherein the primary antibody or the second antibody is labeled with a radioisotope, an enzyme, biotin/avidin or a fluorogenic substance.

10. (Withdrawn) The soluble HM1.24 antigen protein having the amino acid sequence modified by lacking 17 or less amino acid residues from the C-terminal in the amino acid sequence as set forth in SEQ ID NO: 1, or a protein having an amino acid sequence modified by lacking 17 or less amino acid residues from the C-terminal, and lacking 27 or less amino acid residues from the N-terminal in the amino acid sequence shown in SEQ ID NO: 1.

11. (Withdrawn) A fusion protein of the soluble HM1.24 antigen protein according to claim 10 and another peptide or polypeptide.

12. (Withdrawn) DNA encoding the soluble HM1.24 antigen protein or the fusion protein of the soluble HM1.24 antigen protein and another peptide or polypeptide according to claim 10.

13. (Previously Presented) The immunochemical assay according to claim 7, wherein the primary antibody is labeled with a radioisotope, an enzyme, biotin/avidin or a fluorogenic substance.

14. (Withdrawn) DNA encoding the soluble HM1.24 antigen protein or the fusion protein of the soluble HM1.24 antigen protein and another peptide or polypeptide according to claim 11.

15. (Previously Presented) The immunochemical assay according to claim 4, wherein said support is a bead or a plate.

16. (Previously Presented) The immunochemical assay according to claim 4 wherein said support is beads or a plate.

17. (New) An immunochemical assay for anti-HM1.24 antibody, said assay comprising the steps of reacting soluble HM1.24 antigen protein and anti-HM1.24 antibody contained in a test sample, and then detecting or determining the anti-HM1.24 antibody bound to the soluble HM1.24 antigen protein, wherein the soluble HM1.24 antigen protein is:

(a) a protein having the amino acid sequence modified by lacking 17 amino acid residues from C-terminal in the amino acid sequence shown in SEQ ID NO:1;

(b) a protein having the amino acid sequence modified by lacking 17 amino acid residues from C-terminal, and lacking 27 amino acid residues from N-terminal in the amino acid sequence shown in SEQ ID NO:1;

or

(c) a fusion protein comprising the protein described in the above (a) or (b), and a peptide selected from the group consisting of FLAG, 6 x His comprising 6 histidine residues, 10 x His, influenza hemagglutinin, fragments of human c-myc, fragments of VSV-GP, fragments of p18HIV, T7-tag, HSV-tag, E-tag, fragments of SV40T antigen, lcktag, fragments of  $\alpha$ -tubulin, B-tag, and fragments of Protein C, or a polypeptide selected from the group consisting of glutathione S-transferase, HA, the constant regions of immunoglobulin,  $\beta$ -galactosidase, and maltose-binding protein.